UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,960	08/08/2001	Satoru Nakamura	212531US2	2084

22850 7590 03/15/2005

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
MILIA, MARK R	

ART UNIT	PAPER NUMBER
2622	

DATE MAILED: 03/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/923,960	NAKAMURA, SATORU	
	Examiner	Art Unit	
	Mark R. Milia	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-27 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-27 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 08 August 2001 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 8/8/01.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: Page 30, line 11, "R3" should read "R13". Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 6-7, 10-11, 15-16, 19-20, and 24-25 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5583644 to Sasanuma et al.

Regarding claims 1 and 19, Sasanuma discloses a printer controller and computer-readable storage medium which stores a program (see column 8 lines 35-38) which generates pattern data to be printed by a printer engine for use in carrying out a tone adjusting process, said printer controller comprising a memory which stores reference tone patterns and tone adjusting patterns (see Fig. 1 and column 3 lines 12-23), selecting means for selecting a dot size of one of the reference tone patterns to be printed, said dot size being determined by a number of pixels forming each dot (see column 4 lines 26-33, column 6 lines 1-30, and column 6 lines 64-column 7 lines 27), and generating means for generating and outputting to the printer engine said one of the reference tone patterns by the dot size selected by said selecting means and tone adjusting patterns having tones falling within a predetermined range with respect to a reference tone of said one of the reference tone patterns, based on the reference tone patterns and the tone adjusting patterns stored in said memory (see Fig. 3, column 4 lines 6-27 and 56-59, column 5 lines 46-49, and column 6 lines 15-37).

Regarding claim 10, Sasanuma discloses an image forming apparatus comprising a printer controller which generates pattern data (see Fig. 1 and column 3 lines 12-32), a printer engine which prints the pattern data generated by said printer controller for use in carrying out a tone adjusting process (see Fig. 1 and column 3 line 36-column 4 line 5), said printer controller comprising a memory which stores reference tone patterns and tone adjusting patterns (see Fig. 1 and column 3 lines 12-23),

selecting means for selecting a dot size of one of the reference tone patterns to be printed, said dot size being determined by a number of pixels forming each dot (see column 4 lines 26-33, column 6 lines 1-30, and column 6 lines 64-column 7 lines 27), and generating means for generating and outputting to the printer engine said one of the reference tone patterns by the dot size selected by said selecting means and tone adjusting patterns having tones falling within a predetermined range with respect to a reference tone of said one of the reference tone patterns, based on the reference tone patterns and the tone adjusting patterns stored in said memory (see Fig. 3, column 4 lines 6-27 and 56-59, column 5 lines 46-49, and column 6 lines 15-37).

Regarding claims 2, 11, and 20, Sasanuma discloses the system discussed in claims 1, 10, and 19, and further discloses wherein said selecting means selects the dot size in response to an external input (see column 6 line 64-column 7 line 27 and column 8 lines 33-35).

Regarding claims 6, 15, and 24, Sasanuma discloses the system discussed in claims 1, 10, and 19, and further discloses wherein said selecting means selects the dot size depending on a resolution which is input to the printer controller (see column 4 lines 10-33 and column 4 line 60-column 5 line 49).

Regarding claims 7, 16, and 25, Sasanuma discloses the system discussed in claims 1, 10, and 19, and further discloses wherein said selecting means selects the dot size depending on each of basic colors used by corresponding image forming sections of the printer engine (see column 7 line 35-column 8 line 7).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3, 12, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasanuma as applied to claims 1, 10, and 19 above, and further in view of U.S. Patent No. 6367992 to Aruga et al.

Sasanuma discloses wherein said selecting mean automatically selects the dot size (see column 4 lines 10-59).

Sasanuma does not disclose expressly selecting the dot size depending on a counted value of a maintenance counter within the printer engine, said counted value being received from the printer engine and indicating a total operating time of the printer engine.

Aruga discloses a maintenance counter within the printer engine, said counted value being received from the printer engine and indicating a total operating time of the printer engine (see the abstract, Figs. 1A and 6, column 2 lines 1-8, column 5 lines 15-41, column 6 lines 33-42, column 8 line 66-column 9 line 7, column 10 lines 17-29 and 46-47, and column 11 lines 3-18).

Sasanuma & Aruga are combinable because they are from the same field of endeavor, print systems to ensure high quality printing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the counter aspect of Aruga with the system of Sasanuma.

The suggestion/motivation for doing so would have been to provide a way to easily check the wear on consumables to ensure high printer quality (see column 11 lines 13-18 of Aruga).

Therefore, it would have been obvious to combine Aruga with Sasanuma to obtain the invention as specified in claims 3, 12, and 21.

Claims 4, 13, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasanuma as applied to claims 1, 10, and 19 above, and further in view of U.S. Patent No. 5797061 to Overall et al.

Sasanuma discloses wherein said selecting mean automatically selects the dot size (see column 4 lines 10-59).

Sasanuma does not disclose expressly selecting the dot size depending on an output value of a toner sensor within the printer engine, said output value being received from the printer engine and indicating a remaining amount of toner within the printer engine.

Overall discloses an output value of a toner sensor within the printer engine, said output value being received from the printer engine and indicating a remaining amount of toner within the printer engine (see Figs. 1, 2, and 7, column 2 lines 61-67, column 5 lines 42-54, column 8 lines 14-27 and 38-47, column 11 lines 1-21, column 12 lines 41-60, and column 13 lines 38-62).

Sasanuma & Overall are combinable because they are from the same field of endeavor, reliable reproduction of print data onto a print medium.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the toner level usage aspect of Overall with the system of Sasanuma.

The suggestion/motivation for doing so would have been to provide a more accurate tracking system to allow higher predictability of reproduced resolution and increases gradation matching between the original document and the reproduced document.

Therefore, it would have been obvious to combine Overall with Sasanuma to obtain the invention as specified in claims 4, 13, and 22.

Claims 5, 14, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasanuma as applied to claims 1, 10, and 19 above, and further in view of U.S. Patent No. 6618162 to Wiklof et al.

Sasanuma discloses wherein said selecting mean automatically selects the dot size (see column 4 lines 10-59).

Sasanuma does not disclose expressly selecting the dot size depending on an engine ID stored in a register within the printer engine, said engine ID being received from the printer engine and indicating a type of the printer engine.

Wiklof discloses an engine ID stored in a register within the printer engine, said engine ID being received from the printer engine and indicating a type of the printer engine (see column 5 line 41-column 6 line 28).

Sasanuma & Wiklof are combinable because they are from the same field of endeavor, printer configuration to ensure printer performance.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the engine type identifier of Wiklof with the system of Sasanuma.

The suggestion/motivation for doing so would have been to provide increased performance based on hardware components capabilities.

Therefore, it would have been obvious to combine Wiklof with Sasanuma to obtain the invention as specified in claims 5, 14, and 23.

Claims 8, 17, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasanuma as applied to claims 1, 10, and 19 above, and further in view of U.S. Patent No. 6076915 to Gast et al. and to Japanese Patent Document No. 11-070701 to Watabe as cited on Information Disclosure Statement date August 8, 2001. Reference will be made to computer translation of Japanese Patent Document No. 11-070701 and is therefore attached to this Office Action.

Sasanuma does not disclose expressly wherein said generating means generates said one of the reference tone patterns and the tone adjusting patterns which form a circular shape as a whole, so that said one of the reference tone patterns is

made up of a circular central portion and sector portions arranged intermittently in a 360 degree range, and the tone adjusting patterns are formed by sector portions respectively arranged intermittently to be located between two mutually adjacent sector portions of said one of the reference tone patterns, whereby each of the tone adjusting patterns has three sides which are respectively adjacent to said one of the reference tone patterns.

Watabe discloses wherein said generating means generates said one of the reference tone patterns and the tone adjusting patterns which allows the operator to compare and match the tone patterns in which the patterns are arranged adjacent to each other (see Drawings 8 and 13 and paragraphs [0027]-[0037]).

Gast discloses a printer calibration system in which a variety of shapes and sizes can be used to allow an operator to visually match the test patterns (see Figs. 4 and 9, column 5 lines 23-25 and 55-60, column 6 lines 4-63, and column 7 line 59-column 8 line 24)

Sasanuma & Gast and Watabe are combinable because they are from the same problem solving area, printing adjustments using test pattern techniques.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the test pattern of gradation technique disclosed by Watabe with the calibration technique using a circular pattern as disclosed by Gast and use the combined technique with the system of Sasanuma.

The suggestion/motivation for doing so would have been to allow easy visual pattern matching regardless of the calibration axis (see column 8 lines 15-25 of Gast).

Therefore, it would have been obvious to combine Gast and Watabe with Sasanuma to obtain the invention as specified in claims 8, 17, and 26.

Claims 9, 18, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasanuma as applied to claims 1, 10, and 19 above, and further in view of U.S. Patent No. 5258783 to Sasanuma et al.

Sasanuma (5583644) does not disclose expressly correcting means for carrying out a gamma-correction based on an external input which is made based on a printed output result made by the printer engine in response to said one of the reference tone patterns and the tone adjusting patterns generated by said generating means.

Sasanuma (5258783) discloses correcting means for carrying out a gamma-correction based on an external input which is made based on a printed output result made by the printer engine in response to said one of the reference tone patterns and the tone adjusting patterns generated by said generating means (see Figs. 2 and 4, column 1 lines 34-45, column 3 lines 29-51, and column 4 lines 5-32).

Sasanuma (5583644) & Sasanuma (5258783) are combinable because they are from the same field of endeavor, print system to improve image quality.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the gamma-correction aspect of Sasanuma (5258783) with the system of Sasanuma (5583644).

The suggestion/motivation for doing so would have been to prevent deterioration of image quality in image reproduction.

Therefore, it would have been obvious to combine Sasanuma (5258783) with Sasanuma (5583644) to obtain the invention as specified in claims 9, 18, and 27.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. To further show state of the art refer to U.S. Patent numbers 5579090 and 6034788 (Sasanuma et al.), 6215562 (Michel et al.), and 6417876 (Nakajima et al.).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark R. Milia whose telephone number is (703) 305-1900. The examiner can normally be reached M-F 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached at (703) 305-4712. The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mark R. Milia

Examiner
Art Unit 2622

MRM

JOSEPH R. POKRZYWA
EXAMINER
ART UNIT 2622

Joseph R Pokrzywa

EDWARD COLES
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600